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(54) OPEN TOP CONTAINER INCLUDED DEVICE OPEN AND CLOSE

● Abstract

Machine Translation

Human Translation

The invention relates to the open top container which prevents the damage of human life which can be generated while removing the fixed bar installed at the location which can reduce discomfort and the working time which conveniently automatically opens and closes the roof of the container which opens and closes roof among the mainly used container when shipping the export purpose cargo to the slide type, respects roof opening and shutting to do, and in addition, is higher than the key of operator, and in which the opening/closing device in which VAR in which the roof of container is slided in the open state is kept in one side of container and preventing damage and lost of the slide bar is equipped. And as to container including the cover in the upper end this opens and closes roof, rail is installed at both sides upper end inner side of Tenny. A plurality of casters in which connector is equipped in the rail is included. And it is the invention which opens and closes the cover of roof while it unites both ends of the slide bar in the connector of the caster and the slide bar and caster are slided, can be comprised.

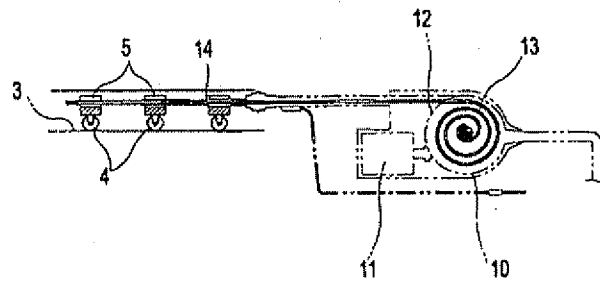
Machine Translation

Human Translation

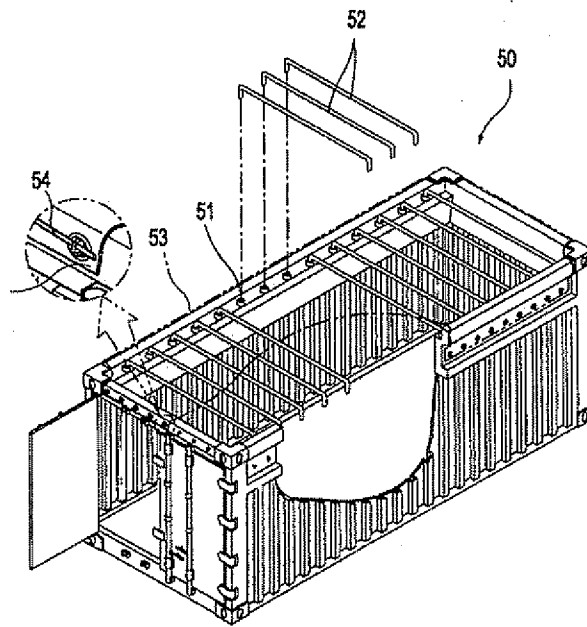
PURPOSE: An open top container having an automatic open and shut device is provided, thereby opening and shutting the roof of the container easily.

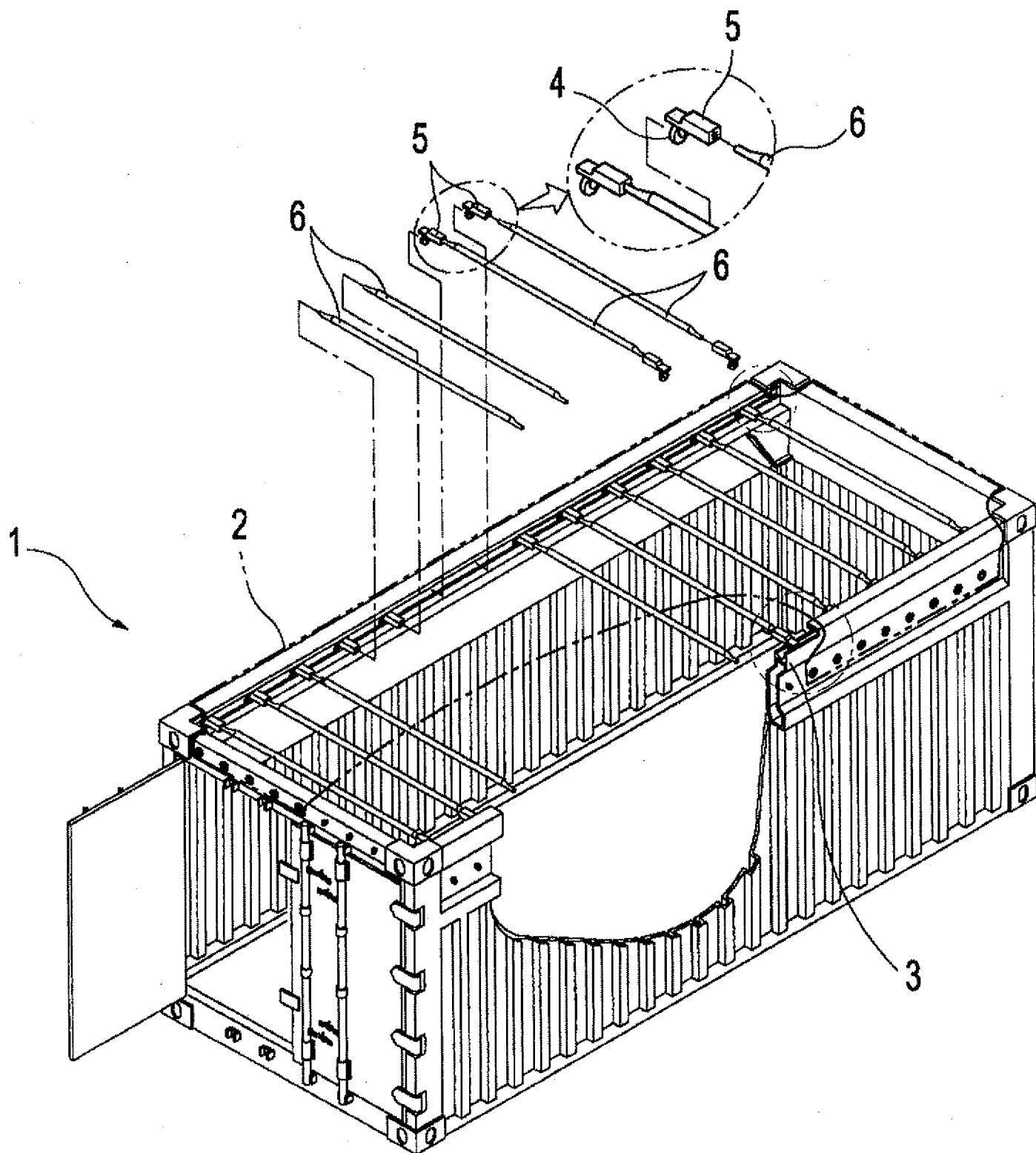
CONSTITUTION: The open top container(1) having an automatic open and shut device comprises the parts of: a cover(2); rails(3) which are installed in both upper insides of the container(1); numerous casters(4) having connecting apparatuses(5) in the rails(3); and slide bars(6) which are connected to both ends of the connecting apparatus(5), so that the slide bars(6)

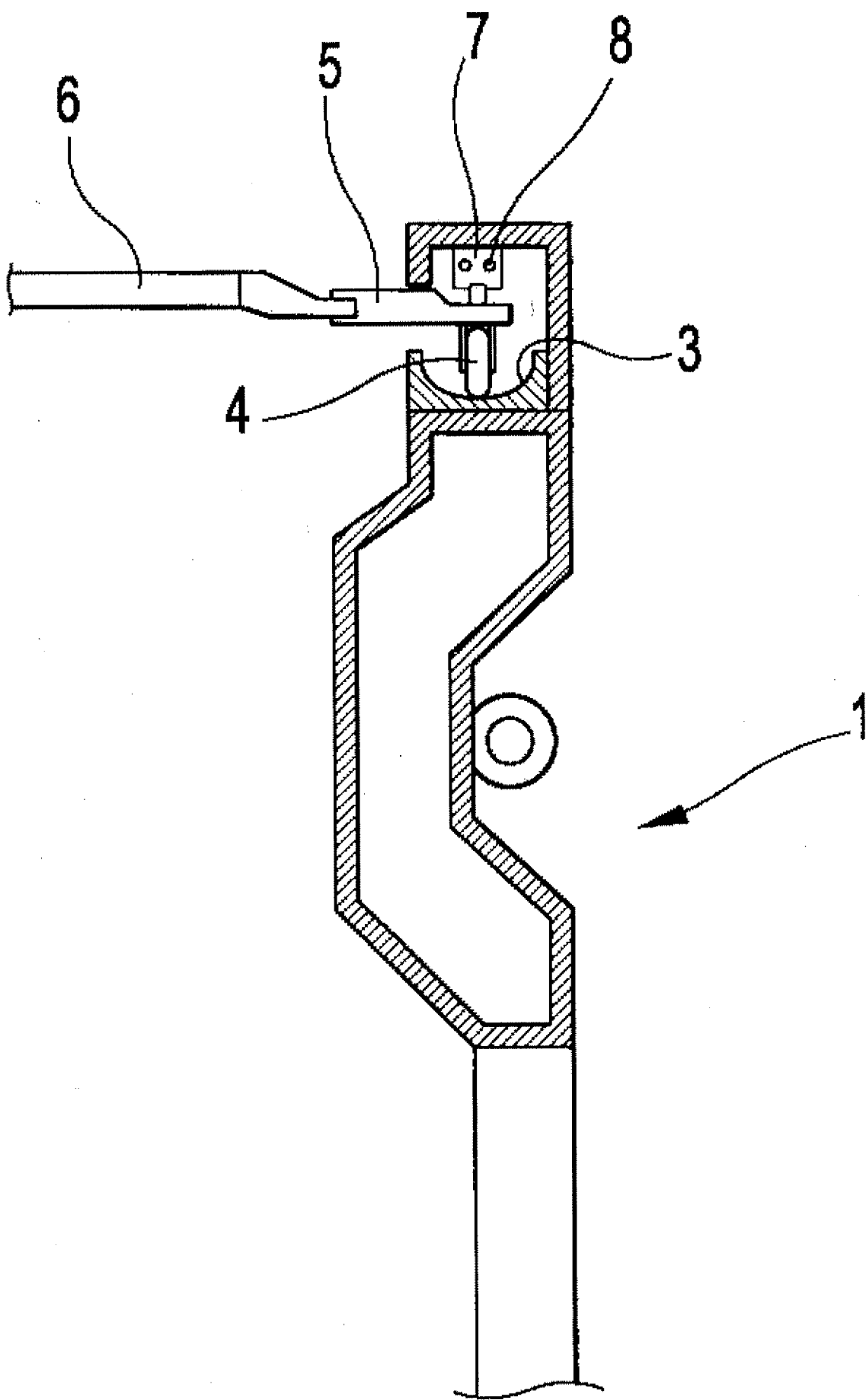
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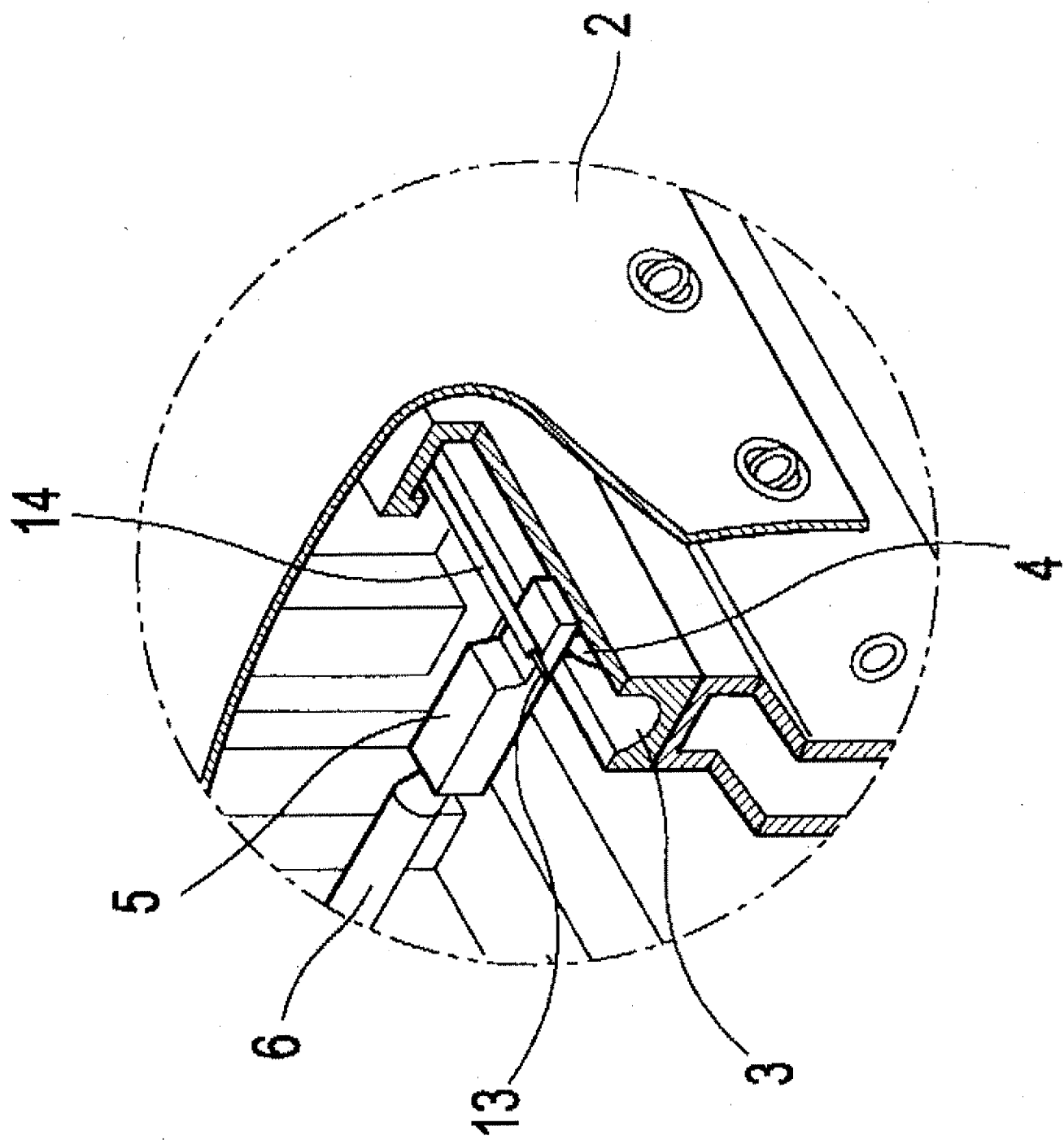


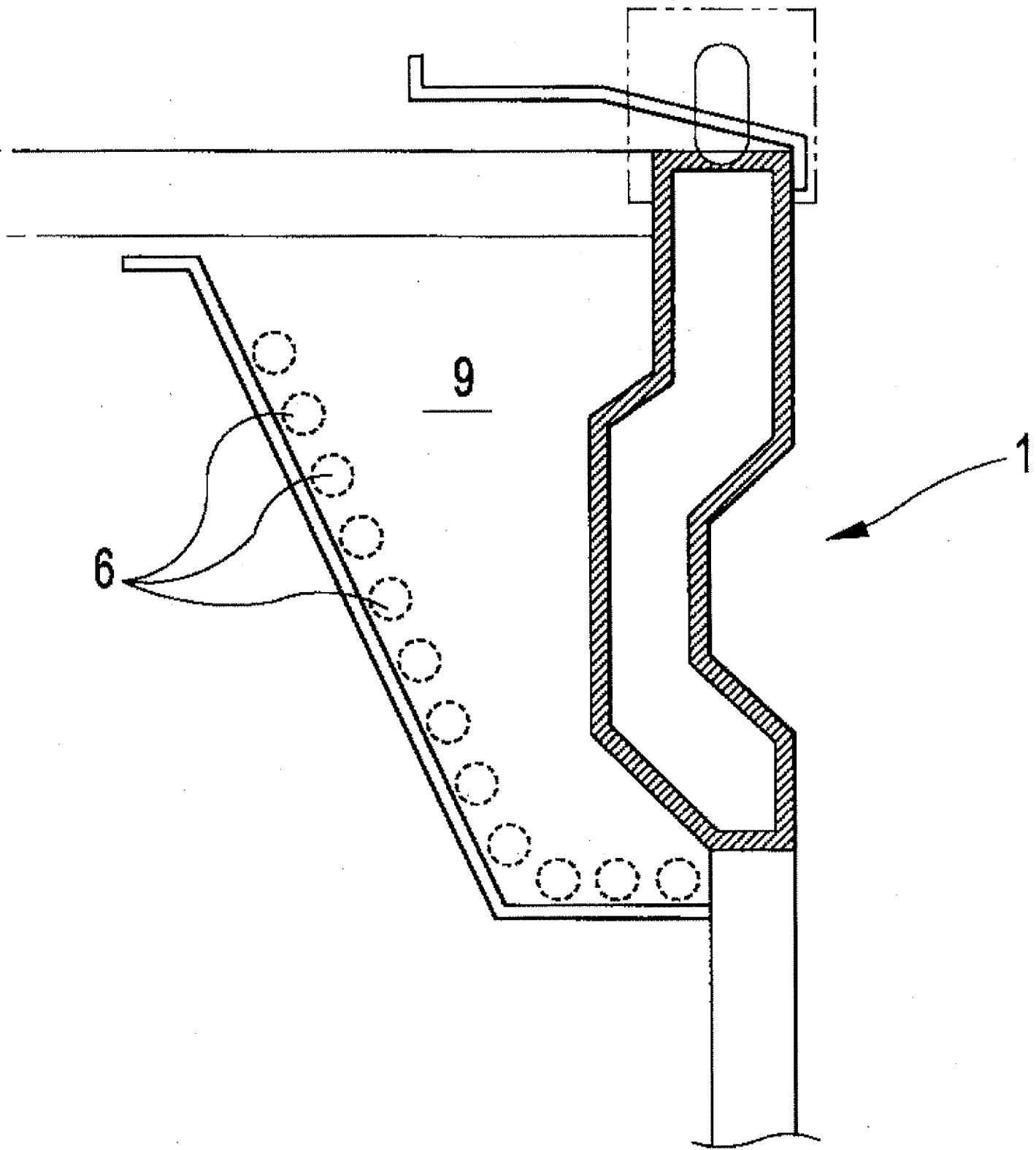
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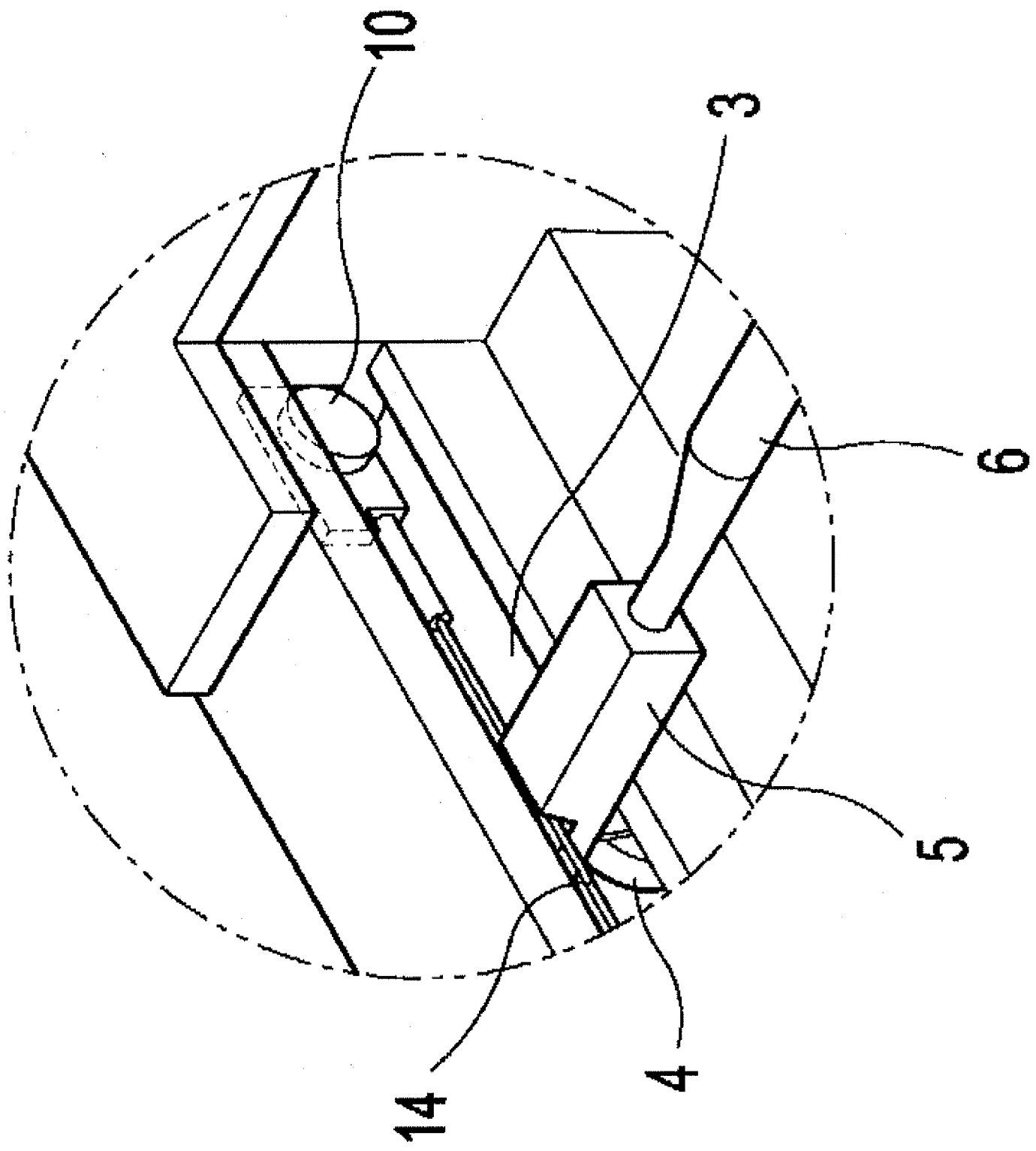


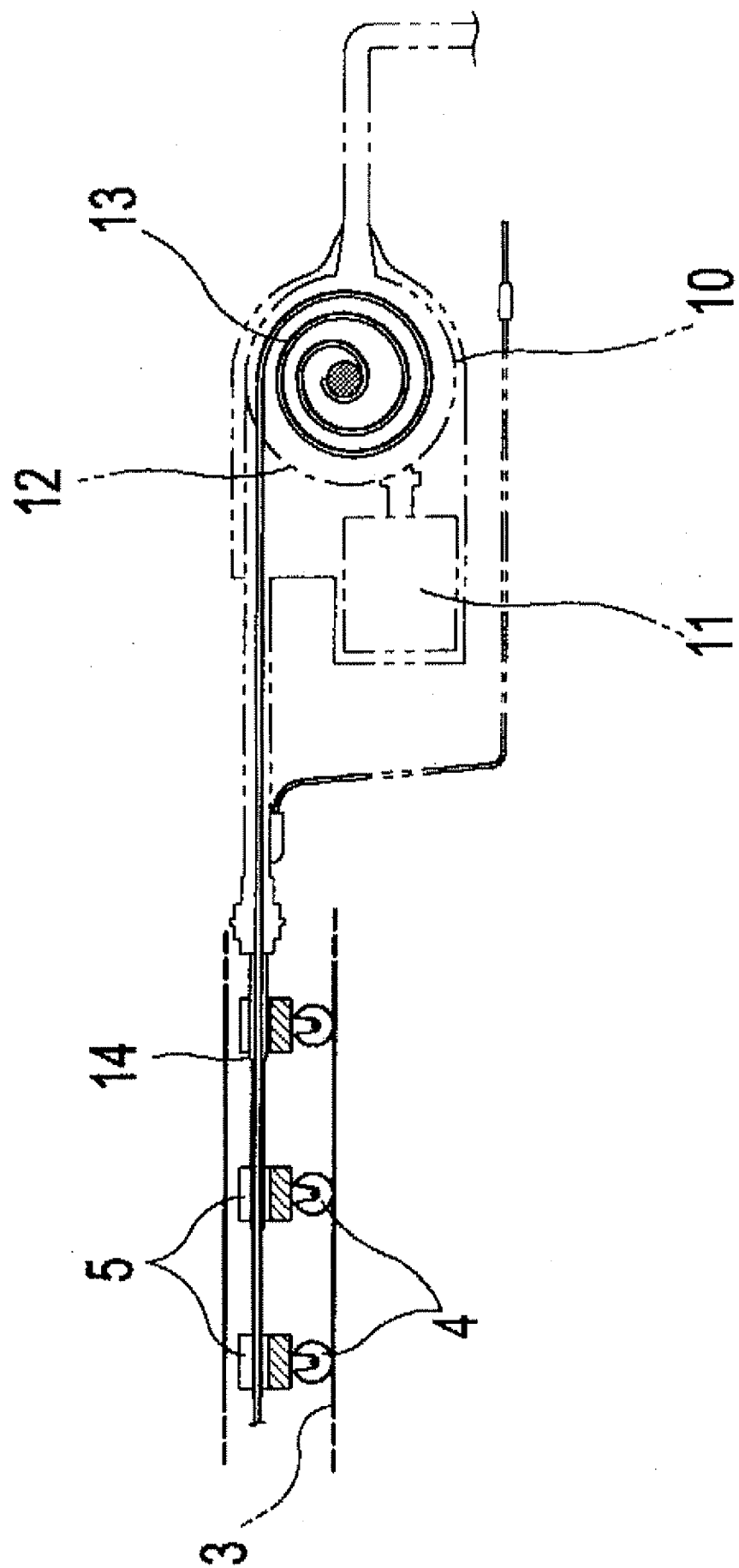




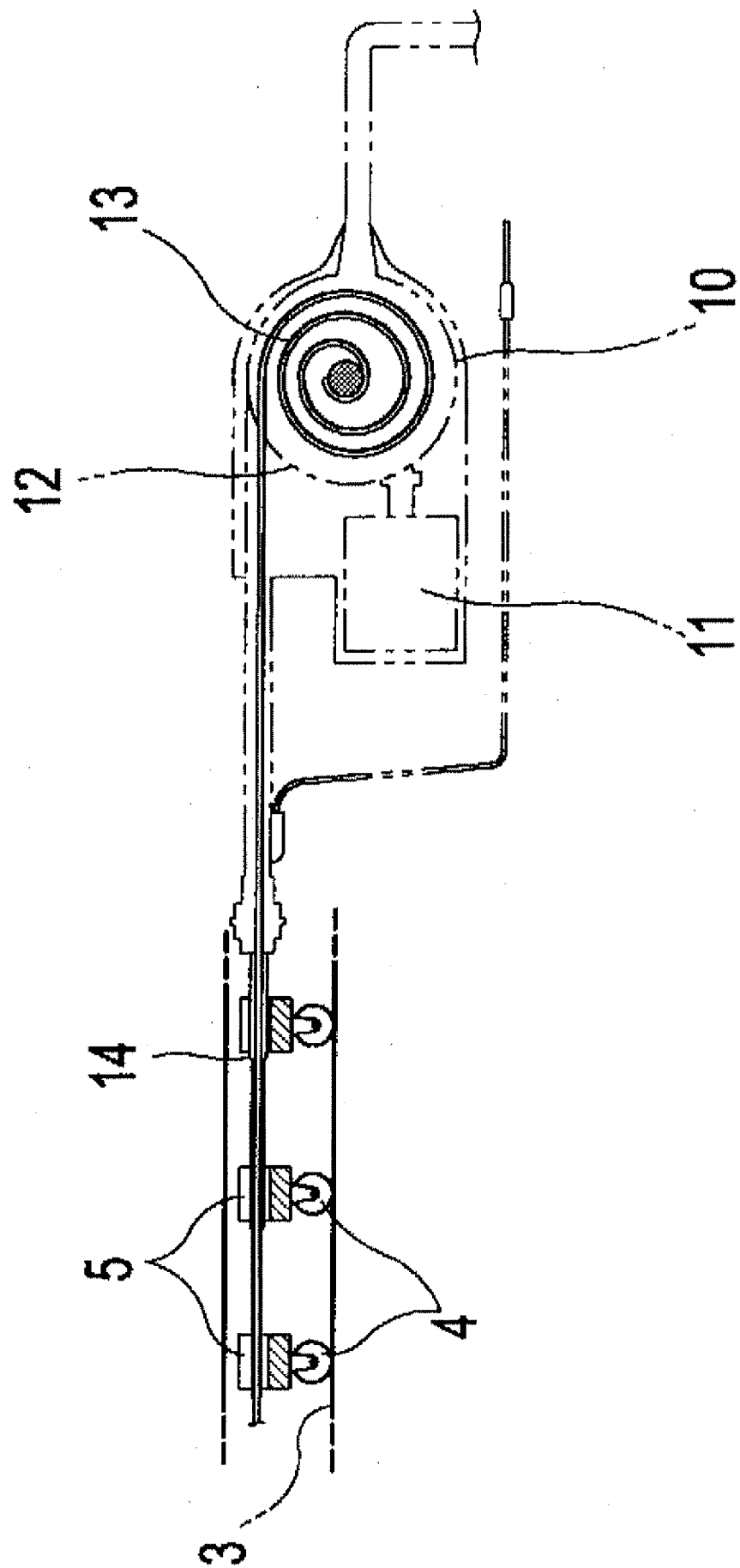


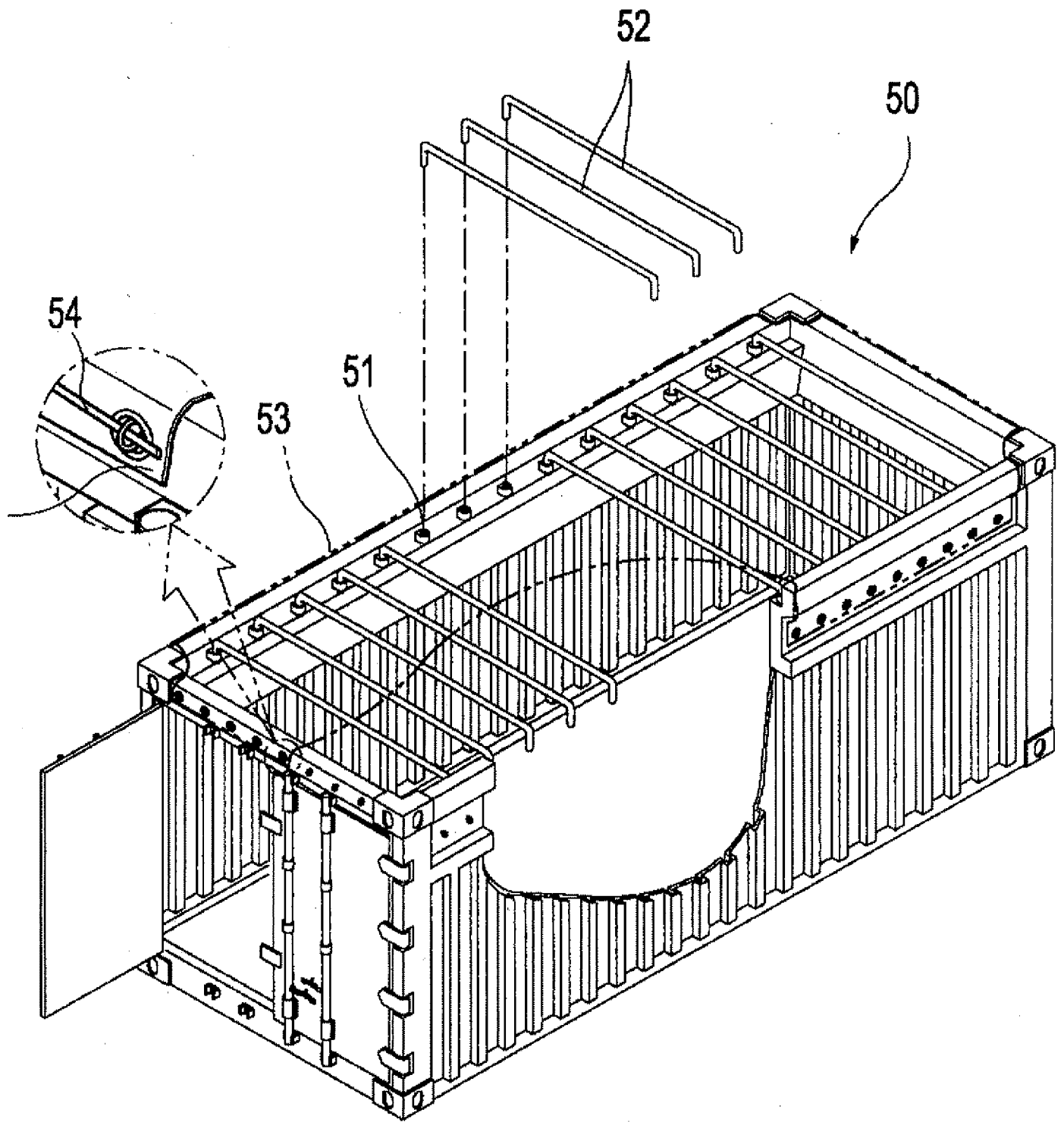












and casters(4) are slid to open and shut the cover(2).

#### ► Representative Drawing(s)

Fig. 1

#### ► Keyword(s)

Container, roof, and opening and shutting.

#### 🌀 Description

##### 🕒 Brief explanation of the drawing

- 2 Fig. 1 is a part disassembled perspective view cutting out a part of the invention
- 3 Fig. 2 is a main part enlarged vertical longitudinal sectional view of the invention
- 4 Fig. 3 is a main part extration perspective view of the invention
- 5 Fig. 4 is a cross-sectional view the receiving portion is shown
- 6 Fig. 5 is a perspective view the drive unit is shown
- 7 Fig. 6 is an action status sectioned drawing of the drive unit
- 8 Fig. 7 is a part disassembled perspective view cutting out a part of the conventional container
- 9 The description \* of the symbol about the main part of \* drawing.
- 10 1: container 2: cover.
- 11 3: rail 4: caster.
- 12 5: connector 6: slide bar.
- 13 7: holding member 8: opening and shutting rope.
- 14 9: receiving portion 10: drive unit.
- 15 11: electric motor 12: wheel.
- 16 13: rack gear 14: symmetrical VARI.

##### 🕒 Details of the Invention

###### ► Purpose of the Invention

The Technical Field to which the Invention Belongs and the Prior Art in that Field

- 17 The invention relates to the roof closable container which is mainly used when shipping the export purpose cargo. And particularly, it is about the open top container in which the opening/closing device which conveniently automatically opens and closes the roof of the container which opens and closes roof among the mainly used container when shipping the export purpose cargo is

equipped.

- 19 Generally, container protects the cargo to carry from outside. In order to preventing the fall of cargo etc., all kinds of the cargoes is loaded, put and transport, the cargo is used. And the use of this container is the commodity which has to use in the import/export cargo.
- 20 Moreover, in order to load the cargo of the load big and heavy with the encapsulated type container comprising up down left right all parts with the fixed type the door of the back side for loading cargo and dropping and drop, the container for the goods transport as described above is classified into the roof closable container which open and shuts roof.
- 21 But there can be the big discomfort which has to drop this roof closable container (50) loads cargo it one by one altogether removes the fixed bar (52) in which both ends is inserted in the loop (51) it peels off the cover (53) it loosens the fixing rope (54) it drops it loads the bulky goods it comprises it binds girth with the fixing rope (54) it covers the upper part with the cover (53) it takes out it inserts both ends of the fixed bar (52) in the loop (51) it stationarily includes the excellently many loop (51) as the conventional roof closable container, as shown in Fig. 7, the equally-spaced in both inside upper end of the container (50).
- 22 Moreover, there is a problem that the fixed bar as described above is installed at the location higher than the key of operator. In addition, the damage of human life by the fixed bar can come due to the heavy weight in the task halfway.
- 23 In the meantime, there is a problem that there is much concern which the conventional roof closable container (50) as described above is damaged in the task halfway since separately to keeping the fixed bar (52) which removes in order to load cargo or drop in one side of the container (50) or is missing.

#### Technical challenges of the Invention

- 24 Therefore, an object of the present invention is to provide the open top container which prevents the damage of human life which can be generated while removing the fixed bar installed at the location which can reduce discomfort and the working time which conveniently automatically opens and closes the roof of the container which opens and closes roof among the mainly used container when shipping the export purpose cargo to the slide type, respects roof opening and shutting to do, and In addition, is higher than the key of operator, and in which the opening/closing device in which VARI in which the roof of container is slid in the open state is kept in one side of container and preventing damage and lost of the slide bar is equipped.

#### ► Structure & Operation of the Invention

- 25 Hereinafter, specifically it is the preferred embodiment of the present invention the same with the attached view like next.
- 26 As to container (1) including the cover (2) in the upper end roof open and is shut, the rail (3) is installed at both sides upper end inner side of the Tenny (1). A plurality of casters (4) in which the connector (5) is equipped in the rail (3) is included. And while both ends of the slide bar (6) is united in the connector (5) of the caster (4) and the slide bar (6) and caster (4) are slid, the cover (2) of roof is opened and is closed.
- 27 At this time, the connector (5) upper of the caster (4), when the equally-spaced holding member (7) like the vertical blind being included and the slide bar (6) moving with the caster (4) and closing roof, the slide bar (6) and caster (4) support the cover (2) to equally-spaced.
- 28 After it unfastens the fixing rope which binds the roof cover (2) when loading the roof closable container (1) with the bulky goods or dropping and the invention composed like this way separates the end part of the cover (2) from the container (1), if the slide bar (6) is sliden, roof is conveniently opened and the bulky goods is loaded or roof can drop.
- 29 That is, in the container (1), the effect pulling a light like the passive type vertical blind among opening and shutting rope (8) of the duplex when sliding the slide bar (6) in the state separating the end part of the cover (2) and it open and shuts roof while the slide

bar (6) is slid or sets up the motor in opening and closing rope (8) and pulls opening and shutting rope (8) by the hand is obtained and roof open and can be shut.

- 30 At this time, the slide bar (6) can be opened and closed in smoothly with the caster (4) since the slide bar (6) both ends is combined through the connector (5) in the caster (4).
- 31 Moreover, even if the caster (4) sliding comprises with the rail (3) with the semicircular shape, for the slide bar (6), the deformation of little is generated due to the external impact, smooth opening and shutting are comprised.
- 32 Particularly, since simply repairing if when the slide bar (6) was extremely transformed into due to the external impact etc., it separates from the connector (5) of the caster (4) only the transformed slide bar (6) and it exchanges with the new slide bar (6), it moreover makes facilitated with maintenance and repair.
- 33 Since it forms the receiving portion (9) when moving slide bar (6) towards the front and opening roof so that the opened slide bar (6) be accepted to the container (1) inner side, it more easily loads the bulky goods or the roof opening/closing device according to the present invention as described above can drop. In addition, it prevents from the slide bar (6) being damaged in the process of loading the bulky goods or dropping or being lean.
- 34 In the meantime, as described above, it sets up the foldable drive unit (10) like the antenna of vehicle and it connects the connector (5) to the symmetrical VAR (14) of the drive unit (10) and the slide bar (6) is folded to the slide bar (6) which slide is opened and closed.
- 35 At this time, the foldable drive unit (10) rotates the wheel (12) at the electric motor (11). While the rack gear (13) is reeled in the wheel (12) and the rack gear (13) is loosened or it reels, the symmetrical VAR (14) spreads like antenna or antenna is folded, the slide bar (6) is opened and is closed in slide. And in order to operate the symmetrical VAR (14) to the fluid pressure and it folds the slide bar (6) this drive unit (10) can comprise.

#### ► Effects of the Invention

- 36 Provided is the effect that the invention can prevent the damage of human life which can be generated while removing the fixed bar installed at the location which can reduce discomfort and the working time which conveniently automatically opens and closes the roof of the container which opens and closes roof among the mainly used container when shipping the export purpose cargo to the slide type, respects roof opening and shutting to do, and In addition, is higher than the key of operator above statement, and that VAR in which the roof of container is slid in the open state is kept in one side of container and preventing damage and lost of the slide bar.

### Scope of Claims

#### Claim[1] :

- 37 The container in which it sets up the rail (3) in both sides upper end inner side of the Tenny (1) as to container (1) including the cover (2) in the upper end roof open and is shut; it includes a plurality of casters (4) in which the connector (5) is equipped in the rail (3); and the opening/closing device which characterizes to be comprised in order to open and close the cover (2) of roof while it unites both ends of the slide bar (6) in the connector (5) of the caster (4) and the slide bar (6) and caster (4) are slid is equipped.

#### Claim[2] :

- 38 The open top container in which the opening/closing device is equipped of claim 1, wherein the connector (5) upper of the caster (4) characterizes to be comprised in order to support the cover (2) to equally-spaced while including the equally-spaced holding member (7) like the vertical blind and the slide bar (6) moving with the caster (4) and closing roof.

#### Claim[3] :

- 40 The open top container in which the opening/closing device which characterizes that it is comprised so that the slide bar (6) be accepted in the receiving portion (9) is equipped of claim 1, wherein the receiving portion (9) is formed inside the front end of the

container (1) and it is opened.

**Claim[4] :**

- 42 The open top container in which the opening/closing device which characterizes to be comprised in order to connect the symmetrical VAR (14) of the drive unit (10) which loosens the rack gear (13) in the connector (5) or reeled and the slide bar (6) is sliden automatically is equipped of claim 1, wherein the slide bar (6) is combined.